

What is claim d is:

1. A display device comprising:

display pixels disposed in a matrix form to display
5 color images;

driving circuits to drive said display pixels; and
first, second and third signal lines to connect said
display pixels to said driving circuits;

wherein said driving circuits include a reference
10 gray scale signal circuit to sequentially provide a
predetermined number of reference gray scale signals in
accordance with color characteristics of said display pixels
when writing operations are carried out on said signal lines
during each horizontal scanning period,

15 a digital-to-analog conversion circuit to convert
digital video signals supplied to said display pixels in
response to said reference gray scale signals to analog
signals; and

a signal supply circuit to provide said analog signals
20 to said first, second and third signal lines;

wherein said signal supply circuit provides said
analog signal to said first signal lines as video signals when
said reference gray scale signals are supplied in response to
said color characteristics of said display pixels and outputs
25 said analog signals to said second and third signal lines as
preliminary video signals when said video signals are

supplied to said second and third signal lines in each scanning period.

2. The display device according to Claim 1, wherein
5 said reference gray scale signal circuit includes:

resisters to divide power source voltages to output
said reference gray scale signals; and

switches to select said resisters in accordance with
said color characteristics.

10 3. The display device according to Claim 1, wherein
said reference gray scale signal circuit outputs said reference
gray scale signals in order of potentials thereof from a lower
one to higher one.

15 4. A display device comprising:
first, second and third display pixels regularly
disposed in a matrix form to display first, second and third
color images, respectively;

20 first, second and third signal lines connected to said
first, second and third display pixels, respectively;

first, second and third reference gray scale signal
circuits to output first, second and third reference gray scale
signals corresponding to said first, second and third color
25 images, respectively;

a digital-to-analog conversion circuit to convert

digital video signals corresponding to said first, second and third signal lines to analog signals in response to the reference gray scale signals; and

5 a signal supply circuit to supply said analog signals to said signal lines as video signals;

wherein said signal supply circuit includes:

10 a first switch to connect said first signal line to said digital-to-analog conversion circuit during a first period during which said first reference gray scale signal is outputted;

a second switch to connect said second signal line to said digital-to-analog circuit during a second period during which said second reference gray scale signal is outputted; and

15 a third switch to connect said third signal line to said digital-to-analog circuit during a third period during which said third reference gray scale signal is outputted.

20 5. The display device according to Claim 4, wherein said first period is longer than said second or third period.

25 6. The display device according to Claim 4, wherein said first reference gray scale signal is smaller than said second reference gray scale signal and said second reference gray scale signal is smaller than said third reference gray scale signal.

7. A method of driving a display device comprising:
disposing first, second and third display pixels
regularly in a matrix form to display first, second and third
5 color images, respectively;
connecting first, second and third signal lines to
said first, second and third display pixels, respectively;
outputting first, second and third reference gray
scale signals corresponding to said first, second and third
10 color images, respectively;
making a digital-to-analog conversion circuit
convert digital video signals corresponding to said signal lines
to analog signals in response to said first, second and third
reference gray scale signals;
15 supplying said analog signals to said signal lines as
video signals;
connecting said first, second and third signal lines
to said digital-to-analog circuit during a first period during
which said first reference gray scale signal is outputted;
20 connecting said second and third signal lines to said
digital-to-analog circuit during a second period during which
said second reference gray scale signal is outputted; and
connecting said third signal line to said
digital-to-analog circuit during a third period during which
25 said third reference gray scale signal is outputted.

8. Th method of driving a display device according
to Claim 7, wherein said reference gray scale signal circuit
selects said reference gray scale signals with overlapping
periods between said first and second period, said second and
5 third periods and said third and first periods, respectively.

9. The method of driving a display device according
to Claim 7, wherein said reference gray scale signal circuit
outputs said reference gray scale signals in order of potentials
10 thereof from a lower one to higher one.

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